

ABSTRACT OF THE DISCLOSURE

A sensor for sensing the pressure of a first fluid is provided. In one embodiment, sensor for sensing the pressure of a first fluid includes a fiber optic based sensing element disposed in a housing. A buffer fluid is disposed in the housing and is in fluid communication with the sensing element. A pressure transmitter is coupled to the housing for maintaining a predefined relationship between pressures of the first fluid and buffer fluid. A connector assembly is coupled to the housing and is coupled by an optical fiber to the sensing element. The sensor having a connector assembly is suitable for use in harsh conditions, such as within oil and gas well applications.